CLAIMS

1. An electronic component comprising:

a conductive pattern provided on an insulating substrate;

a metal film formed by a plating method on a surface of the conductive pattern; and

a metal oxide layer formed by oxidizing the metal film and disposed on the surface of the conductive pattern.

2. An electronic component comprising:

a conductive pattern provided on an insulating substrate;

a metal film formed by a plating method on a surface of the conductive pattern and a space between electrodes of the pattern on the substrate; and

a metal oxide layer formed by oxidizing the metal film and disposed on the surface of the conductive pattern and also on the space between the electrodes of the pattern on the substrate.

3. An electronic component comprising:

a conductive pattern provided on an insulating substrate;

a metal film formed by a plating method on a surface of the substrate, where the conductive pattern is provided; and

a metal oxide layer formed by oxidizing the metal film and disposed on the surface of the substrate.

4. The electronic component as defined in one of claim 1, 2 or 3, wherein the substrate uses a ceramic substrate.

5. The electronic component as defined in one of claim 1, 2 or 3, wherein the substrate uses a glass-ceramic substrate.

6. The electronic component as defined in one of claim 1, 2 or 3, wherein the substrate uses an organic substrate.

7. The electronic component as defined in one of claim 1, 2 or 3, wherein the conductive pattern uses electrode material including at least Ag.

8. The electronic component of claim 7, wherein the electrode material includes one material selected from the group consisting of Ag, Ag – Pt, and Ag – Pd.

9. The electronic component as defined in one of claim 1, 2 or 3, wherein the metal oxide layer includes one material selected from the group consisting of NiO, ZnO, and CuO.

10. The electronic component as defined in one of claim 1, 2 or 3, wherein the metal oxide layer has a thickness ranging from 0.5μm to 5μm.

11. The electronic component as defined in one of claim 9, wherein the metal oxide layer has a thickness ranging from 0.5μm to 5μm.

12. The electronic component as defined in one of claim 1, 2 or 3, wherein a part of the conductive pattern is exposed outward.

13. The electronic component as defined in one of claim 2 or 3, wherein a part of the conductive pattern and a part of the substrate are exposed outward.

14. A method of manufacturing an electronic component, the method comprising the steps of:

forming a conductive pattern on an insulating substrate;

forming a metal film by a plating method on a surface of the conductive pattern; and

forming a metal oxide layer on the surface of the conductive pattern by oxidizing the metal film.

15. A method of manufacturing an electronic component, the method comprising the steps of:

forming a conductive pattern on an insulating substrate;

forming a metal film by a plating method on a surface of the conductive pattern and on a space between electrodes of the pattern on the substrate; and

forming a metal oxide layer by oxidizing the metal film on the surface of the conductive pattern and on the space between electrodes of the pattern on the substrate.

16. A method of manufacturing an electronic component, the method comprising the steps of:

forming a conductive pattern on an insulating substrate;

forming a metal film by a plating method on a surface of the substrate, where the conductive pattern is formed; and

forming a metal oxide layer by oxidizing the metal film on the surface of the substrate.

17. The method as defined in one of claim 14, 15 or 16, wherein the plating method uses an electroless plating method.

18. The method as defined in one of claim 14, 15 or 16, wherein the oxidizing is done by a heat treatment.

19. The method as defined in claim 18, wherein the heat treatment is carried out at a temperature not higher than a melting point of the conductive pattern.

20. A method of manufacturing an electronic component, the method comprising the steps of:

forming a conductive pattern on an insulating substrate;

forming a nickel film by a plating method at least on a surface of the conductive pattern;

forming nickel oxide as a metal oxide layer at least on the surface of the conductive pattern by providing the nickel film with an oxidation heat treatment at a temperature between 850℃ and a melting point of electrode material forming the conductive pattern.